b) measuring a profile of the single calibration burst;

c) generating a position offset signal corresponding to the sensed single calibration burst, said position offset signal having an offset amplitude; and

d) storing said position offset signal amplitude in the calibration storage field.

REMARKS

Claims 1-16 are pending in the application, with Claims 1, 4-7 and 10-13 having been amended Claims 2-3 and 8-9 having been deleted. Reexamination and reconsideration of the above entitled application is requested.

The Examiner objected to Claims 1-16 under 37 C.F.R. § 1.75(a) because the term "calibration field" or "calibration storage field" as recited in Claims 1-5, 7-11 and 13-14, is not used in the specification. The Examiner also stated that the statement "a calibration storage field centerline that is centered along the track centerline" as recited in Claims 1, 7 and 13, is not found in the specification. In response, Applicant has revised the specification to include the subject terms and statement, which were provided in the claims as originally filed. Thus, Applicants respectfully request that the Examiner withdraw this objection.

The Examiner rejected Claims 1-16 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,500,776 issued to Smith. Applicants respectfully disagree.

The present invention is a method and apparatus for generating a skew or position offset signal for aligning the read element of an MR head with the centerline of written data, during a read operation. The disk in a hard disk drive

has a plurality of tracks, one of which contains a single calibration burst that is written by the write element of the MR head. The calibration burst written by the write element is then read and a profile of the calibration burst with respect to the track centerline is obtained, by sampling the amplitude of the calibration burst over the width of the track. This is accomplished by microjogging the MR head across the track. A position value corresponding to the peak value of the calibration burst obtained during the sampling or microjogging process represents the offset value between the read and write elements at a particular track location. Information representing the position offset is stored in a calibration storage field on a dedicated track. Using this offset value, the read element may be centered with the centerline of written data.

To more clearly define this aspect of the invention, independent Claims 1 and 7 have been amended to recite, in pertinent part, that "one of said tracks having a servo field and a calibration field with a calibration field centerline that is offset from the track centerline, said calibration field includes a single calibration burst providing a burst profile with a peak value that is used to generate a position offset signal, said calibration burst being written by said head, a second one of said tracks having a servo field and a calibration storage field with a calibration storage field center line that is centered along the track centerline, wherein information representing the position offset is stored in the calibration storage field."

In addition, independent Claim 13 has been amended to recite, in pertinent part, the steps of "a) providing a disk having a plurality of tracks each having a centerline, a first one of said tracks having a servo field and a single calibration burst providing a burst profile with a peak value, said calibration burst having a calibration burst centerline that is offset from the track centerline... b)measuring a profile of the single calibration burst; c) generating a

position offset signal corresponding to the sensed single calibration burst, said position offset signal having an offset amplitude; and d)storing said position offset signal amplitude in the calibration storage field."

Smith discloses a method for positioning a read element of a head by introducing an offset into the servo control system of the disk drive to provide the information necessary for the servo motor to move the actuator arm to the desired position. To determine the amount of offset, information is written at locations on of the disk. The read element is then used to read the written information. Reference locations are used to position the read element and the amount of information read is used to provide relative reference values. The relative reference values may be written to the disk with the write element as servo bursts. By comparing a reference location for positioning a read element to a difference between reference values, an amount of offset may be determined.

As stated in column 5, lines 50 - column 6, line 24 of Smith:

> Area 111 indicates where the writer element was when the reader element was centered along servo offset 109 ... Area 112 indicates where the writer element was when the reader element was centered along servo offset 110 ... By reading servo track bursts 103A, 104A and 103B, and writing areas 111 and 112, an offset between writer and reader elements may be determined ... By subtracting area 111 from area 112, a centerline 113 for the writer element relative to a zero value location between the data burst areas, e.g., burst[s] area 102 and 101 is determined. Thus, the difference between centerline 113 for the writer element and centerline 115 ... for the reader element is the offset between the writer element and associated reader element ....

In contrast, the present invention utilizes a single calibration burst that provides a burst profile with a peak value that is used to generate a position offset signal. The offset position values are stored in a calibration storage field of a dedicated track. During normal operation of a calibrated drive, the read

element is aligned with the centerline of the dedicated track and the position offset information may be retrieved by simply reading the information previously stored on the dedicated track. Accordingly, the present invention provides a simple, elegant and efficient apparatus and method for aligning the read element of an MR head.

Accordingly, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e).

CONCLUSION

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration of the objections and rejections is requested. Allowance of the pending Claims at an early date is solicited.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: May 26, 1998

Rocio Dunne 5/26/98
Rocio Dunne *Date*